Digital Jumper Cable status and plans

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DJC's now in the pipeline

5 100-cm Basic L2-5 prototypes with 2.5mm and 3.0mm connectors and G10 backing, and bad bridges cut. To go to LaTech for testing.

20 50-cm Century L2-5 prototypes, with open and shorts testing by vendor. Now at FNAL for installation of connectors and backing.

20 86-cm Century L2-5 prototypes, with open and shorts testing by vendor. Work has started at Century.
Delivery ~ 1 Apr 03.

150 50-cm Basic test station cables. Scheduled for delivery to Johnny Green ≈ now. FNAL PO for ablation started.

300 50-cm Century test station cables. To be done after 86-cm prototypes.

Standard procedures for DJC production & testing

To be followed for test station and production cables

1. Fab of bare flex by vendor (Basic, Century, Honeywell ?)
2. Delivery of bare flex to Johnny Green @ FNAL

   Ink marking, entry into spreadsheet/database, forward to ALT for ablation (Cecil Needles)
3. Ablation of cover layer over connector pads by ALT.

   Typ. 7-10 working days. Delivery to Johnny Green.
4. Installation of connectors and G10 backing @ FNAL

   (Bob Jones shop, Cecil Needles)
   Shipment to LaTech for testing
5. Testing at LaTech

   Test for shorts, opens, intermittants

   Measure DC resistance of each line

   Overnight testing for > 1 kV standoff

   Recording test results in spreadsheet/database

   Ship most DJC to FNAL

   Ship ~10% to KSU for double-check

Notes

1. Exceptions for prototype DJC's

   Prototypes will pass through KSU between vendor and ablator, and between ablator and FNAL. KSU will mark as needed and perform visual inspection.

2. What connectors to install

   2.5 mm AVX receptacle on hybrid end, 3.0 mm or 3.5 mm AVX plug on Junction Card end.

   Test station DJCs: use existing 3.0 mm AVX plugs without restraints.

   L2-5 production cables and selected prototypes: 3.0 mm and 3.5 mm AVX plugs with restraints.

3. G10 backing – see Andrei's talk for today

4. What HV tests to do

   LaTech will build fixtures to test ~10 DJC in parallel (overnight HV testing to keep pace with daytime tests).

   All prototype DJC, and all DJC for installation in D0, will be tested overnight at ~1.5 kV.

   Present plan is to test ~10% of test-station DJC's for HV standoff.

   Andrei will investigate HV testing of hybrids at FNAL.

Notes (continued)

5. Data base

    DJC's to use new Oracle database when ready, will use Excel spreadsheets meanwhile.

Testing Schedule at LaTech

1. Test remaining prototypes before summer 2003.

2. Test 450 test station cables during summer 2003.

3. Begin testing production cables in fall 2003, as they arrive.